

Citizen Science with Hoosier Riverwatch

Volunteer Water Monitoring and Available Data



Learning Objectives

Do You Know?

What is citizen science?

What is Hoosier Riverwatch?

What data is publicly available to use?

How can you get involved in Hoosier Riverwatch?

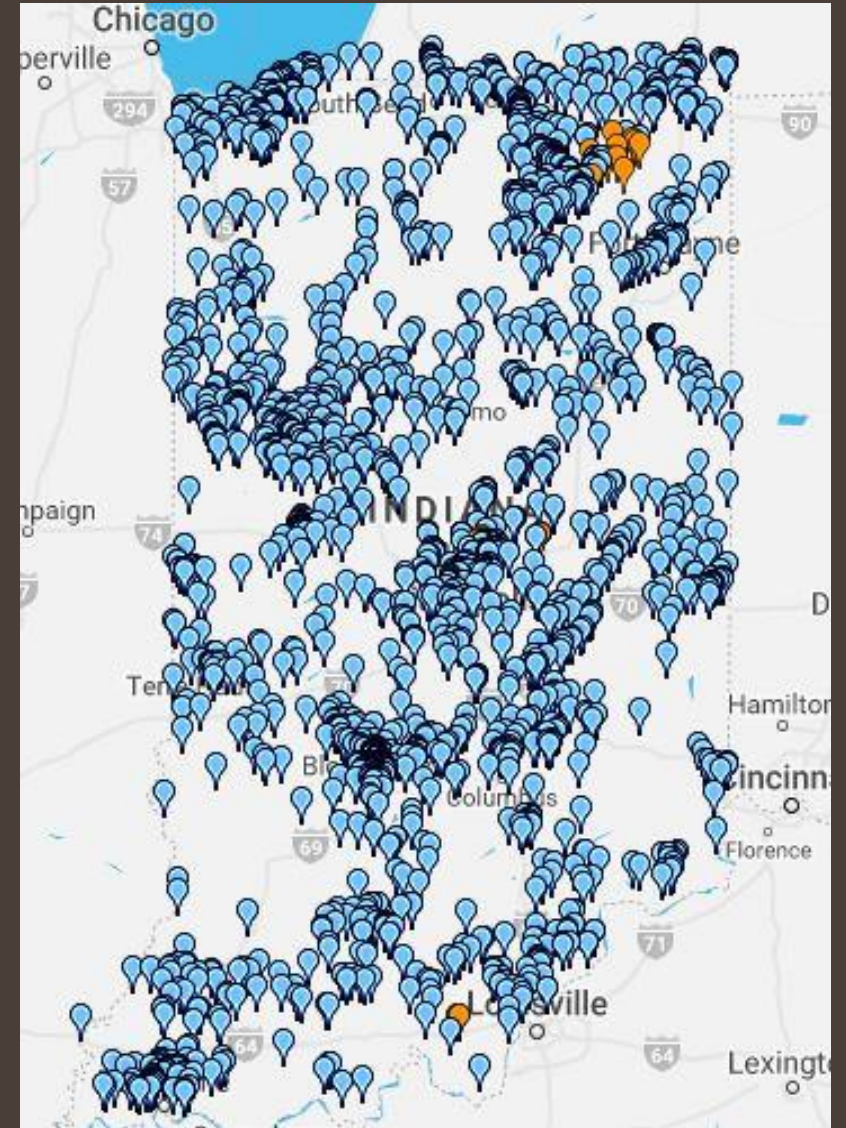
What is Hoosier Riverwatch?

Mission:

To involve citizens of Indiana in becoming active stewards of Indiana's water resources through watershed education, water monitoring, and clean-up activities.

What is Hoosier Riverwatch?

Volunteer Water
Monitoring
Citizen Science Project
Education and Outreach
Involvement and
Awareness



Physical Data

Citizens Qualitative
Habitat Evaluation

(CQHEI)

Observe and Record:

Substrate (bottom of water body)

Fish Cover (hiding places)

Stream Shape/Human Alterations

Stream Forests, Wetlands, and Erosion

Depth and Velocity

Riffles/Runs



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Physical Data

Citizens Qualitative
Habitat Evaluation
(CQHEI)



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Chemical Data

Caution: The HRW
protocol for chemical
testing is not
standardized.

It's still useful!

Dissolved Oxygen

pH

Biochemical Oxygen Demand

Orthophosphate

E. Coli and coliform bacteria

Water Temperature Change

Nitrate and Nitrite

Turbidity

Benthic Macroinvertebrate Collection

Biological Data

Macroinvertebrates!

Most fun part!



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Benthic Macroinvertebrate Identification

Biological Data

Macroinvertebrates!

Most fun part, hands
down.



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Data!

Data collected through
HRW is publicly
available.

There's also a nifty
visualization tool for
general observations.

1 Study Type



Start a comparison study between two watersheds, counties, rivers, or sites.

Compare 2 Different Locations



Take a look at a individual watershed, county, river, or site across a timeframe of your choice.

Look at Same Location Across Time



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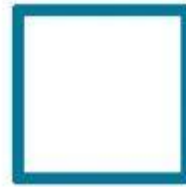
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2 Same Location Across Time. What Location?



Has your watershed's water quality
increased or decreased through time?

Watershed



Has your county's water quality increased
or decreased through time?

County



Has a local river's water quality increased
or decreased through time?

Rivers



Has your site's water quality increased or
decreased through time?

Site



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3 County Selection



Owen

This is my choice



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4 Parameter Selection

Parameter (Above ↑ or Below ↓ State mean for HRW)

Flow ↓

Habitat ↑

BOD ↓

Dissolved Oxygen ↓

E. coli ↑

pH ↓

Ortho P ↓

Nitrate ↓

Pollution Tolerance Index
Rating ↑

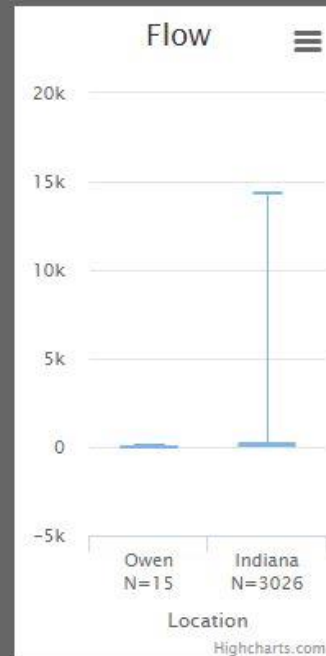
Invert Sampling

Turbidity ↓

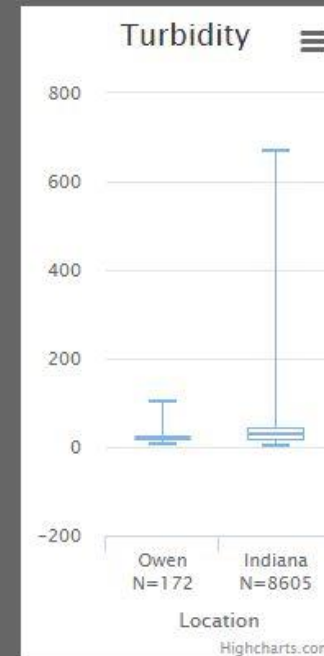
% Sat ↓

Temperature ↑

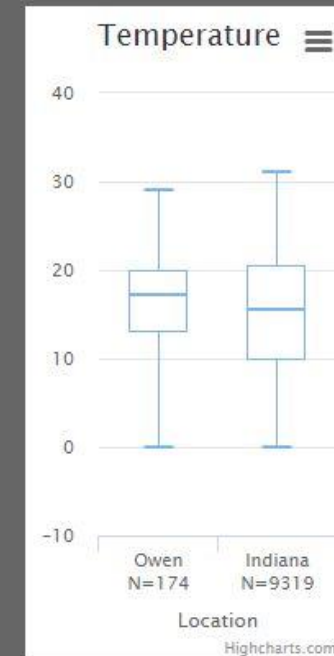
Water Quality Index ↑



More Details



More Details



More Details

Data!

Data collected through
HRW is publicly
available.

You can also get the raw
data.



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Watershed:

St. Joseph (Lake Michigan) (04050001) ▼

Select from one of the watersheds in the state of Indiana. Once you select a watershed, the name of the watershed the system is searching will appear next to the magnifying glass below.
Q 04050001

Waterbody Name:

Begin by typing the name of your waterbody of interest into the search field to bring up a list of waterbodies to choose from. Note that if you have selected a watershed, only waterbodies in that watershed will appear on this list. When you find your waterbody of interest, click on "Add to Search" to begin the search.
Q

County:

Select ▼

Select a county from the drop down list above. The number of counties that appear in this list depends on the other search fields you have chosen. Note: Due to some duplicative river names, the search might fail if a watershed AND river have been selected prior.
Q

Your search came back with 15006 test results in 1331 unique sampling trips (Event ID). See the table below.

Select all test from riverwatch where code=04050001

Show 50 ▼ entries

Filter by Test: Select Test ▼

Filter by Date: Select Date ▼

Narrow Your Search:

Map	Watershed	Stream	Site ID	Date	Test	Result	Unit	Macro	Macro Count	Event ID	Vol ID	Org
Unique Trip												
	St. Joseph (Lake Michigan)	Fly Creek	188	-0001/11/30	Turbidity	0				1882150000-00-00 00:00:00	215	Lakeland Middle School
Unique Trip												
	St. Joseph (Lake Michigan)	Pigeon Creek	394	-0001/11/30	Turbidity	5				3942150000-00-00 00:00:00	215	Lakeland Middle School

Data!

How should you use this
information?

Starting point
ID Priority Areas
Build volunteer
network

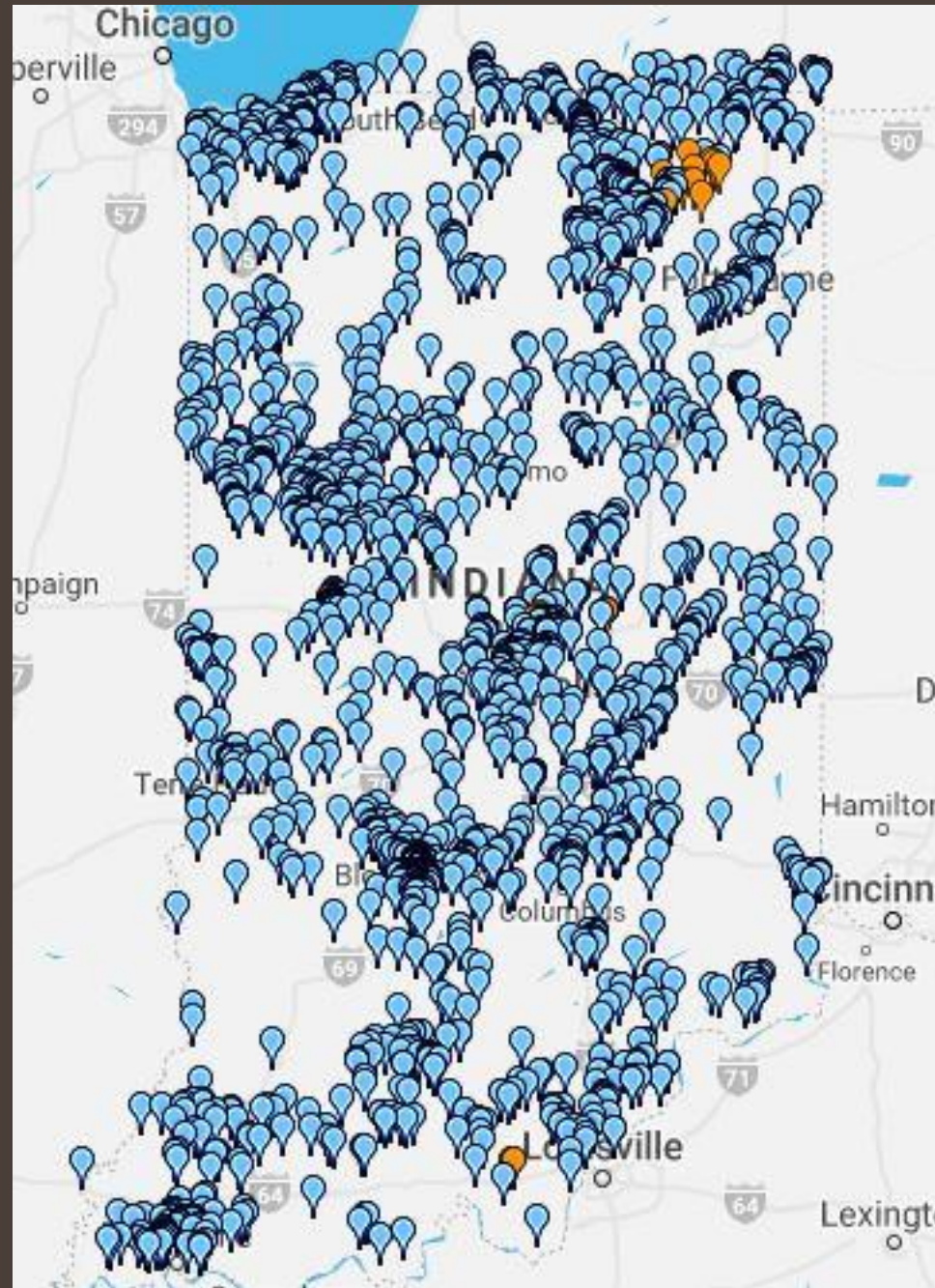


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I like data and
information!
This sounds
like a great
thing to start
on my creek!



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How to Get Trained and Start Monitoring

**Instructors in Elkhart County are housed at the
Elkhart County Parks and the Elkhart County SWCD**

Give us a call to see when our next training workshop is or
schedule one for a group at your school or organization!

Elkhart County Parks: 574-535-6458

Elkhart County SWCD: 574-533-4383 ext 3



Explore these
links and the
“notes” section
below each slide
for background
information

Learn More!



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**Supporting
Information,
Resources, and
Classroom
Activities**

The complete Hoosier Riverwatch Training and Instructors Manual:

<https://www.in.gov/idem/riverwatch/2332.htm>

Hoosier Riverwatch Data:

<http://www.hoosierriverwatch.com/>

Lesson Plans from Project WET:

<https://www.projectwet.org/teach-and-learn/lesson-plans>

**Local Water Monitoring and Watershed Plans from the St. Joseph
River Basin Commission:**

<http://www.sjrbc.com>



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Elkhart County Soil and Water Conservation District

Still want to know
more?

Contact us!

17746-B County Road 34
Goshen, IN 46528

574-533-4383 ext 3

www.elkcoswcd.org

